

In the claims:

Please amend the claims as follows:

1. (Currently Amended) A semiconductor device manufacturing method comprising:
- providing a substrate having a first formation area and a second formation area;
 - forming an oxide film on the first and the second formation areas;
 - forming an oxidation resistance film on the oxide film;
 - masking the second formation area by disposing a photoresist on the oxidation resistance film above the second formation area;
 - removing the oxidation resistant film above the first formation area;
 - removing the photoresist above the second formation area;
 - removing the oxide film above the first formation area while using the oxidation resistant film above the second formation area as a mask; .
 - forming a first oxide film on the first formation area;
 - removing the oxide film on the second formation area and the oxidation resistance film above the second formation area without forming a photoresist; and
 - forming a second oxide film on the second formation area, wherein the first oxide film has thickness different from the second oxide film.
2. (Original) A semiconductor device manufacturing method according to claim 1,
wherein the first oxide film serves as a gate oxide film of a first transistor, and the second oxide film serves as a gate oxide films of a second transistor.
3. (Original) A semiconductor device manufacturing method according to claim 2,
wherein the first transistor is formed on the first oxide film, and the second transistor is formed on the second oxide film,
- wherein the first oxide film is formed by performing thermal oxidization by using the oxidation resistant film as a mask,
 - wherein the second oxide film is formed by performing thermal oxidization.

4. (Currently Amended) A semiconductor device manufacturing method comprising:
forming a device separation film on the semiconductor;
forming an oxide film on a first transistor formation area and a second transistor
formation area by performing thermal oxidization using the device separation film as a mask;
forming an oxidation resistant film across the entire surface of the semiconductor;
removing the oxidation resistant film on the first transistor formation area by using a
photoresist film as a mask;
removing the photoresist film;
removing the oxide film on the first transistor formation area by using the oxidation
resistant film on the second transistor formation area as a mask;
forming a first oxide film by performing thermal oxidization by using the oxidation
resistant film formed on the second transistor formation area as a mask;
removing the oxidation resistant film and the oxide film on the second transistor
formation area without forming a photoresist;
forming a second oxide film on the second transistor formation area by performing
thermal oxidization, wherein the first oxide film has thickness different from the second oxide
film.

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5. (Original) A semiconductor device manufacturing method according to claim 4,
wherein a high-voltage MOS transistor is formed on the first gate oxide film thicker than
the second gate oxide film,

wherein a normal-voltage MOS transistor is formed on the second gate oxide film.

6. (Original) A semiconductor device manufacturing method according to claim 4,
wherein the surface of the semiconductor is not exposed when the photoresist film is used
as a mask.

7. (Previously Amended) A semiconductor device manufacturing method according to
claim 4, wherein forming a first transistor includes:

forming a source/drain layer of a first conductive type having a low concentration by implanting ions of a first conductive impurity into the semiconductor of a second conductive type;

forming a source/drain layer of the first conductive type having a high concentration in the source/drain layer having the low concentration by implanting ions of the first conductive impurity into the semiconductor;

forming a semiconductor layer of the second conductive type that serves as a channel and is located between the source/drain layers of the first conductive type; and

forming a first gate electrode on the semiconductor through the first gate oxide film.

8. (Previously Amended) A semiconductor device manufacturing method according to claim 7,

wherein the source/drain layer having the low concentration is formed to contact at least the semiconductor layer that is formed below the first gate electrode.

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9. (Previously Amended) A semiconductor device manufacturing method according to claim 7,

Conf. wherein the source/drain layer having the low concentration extends in a surface layer of the semiconductor to contact at least the semiconductor layer that is formed below the first gate electrode.

10. (Previously Amended) A semiconductor device manufacturing method according to claim 4 further comprising forming a first transistor after forming the first gate oxide film, including:

forming an opposite conductive source/drain layer having a low concentration by implanting ions of an opposite conductive impurity into the semiconductor of one conductive type;

forming an opposite conductive source/drain layer having a high concentration in the opposite conductive source/drain layer having the low concentration by implanting ions of the opposite conductive impurity into the semiconductor; and

forming a first gate electrode on the semiconductor through the first gate oxide film.

11. (Previously Amended) A semiconductor device manufacturing method comprising:
forming a device separation film on the semiconductor;
forming an oxide film on a first transistor formation area and a second transistor formation area by performing thermal oxidization using the device separation film as a mask;
forming an oxidation resistant film across the entire surface of the semiconductor;
removing the oxidation resistant film on the first transistor formation area by using a photoresist film as a mask;
removing the photoresist film;
removing the oxide film on the first transistor formation area by using the oxidation resistant film on the second transistor formation area as a mask;
forming a first oxide film by performing thermal oxidization by using the oxidation resistant film formed on the second transistor formation area as a mask;
removing the oxidation resistant film and the oxide film on the second transistor formation area;
forming a second oxide film on the second transistor formation area by performing thermal oxidization, wherein the first oxide film has thickness different from the second oxide film; and further comprising:
forming the first transistor after forming the first gate oxide film, which includes
forming first impurity layers having a low concentration by implanting ions of a first conductive impurity into two portions of the semiconductor of a second conductive type;
forming a second impurity layer having a low concentration by implanting ions of the first conductive impurity to connect the first impurity layers;
forming a third impurity layer having a high concentration by implanting ions of the first conductive impurity in the first impurity layer;
forming a fourth impurity layer by implanting ions of a second conductive impurity to divide the second impurity layer; and

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Serial No. : 09/891,580
Filed : June 26, 2001
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Attorney's Docket No.: 10417-085001 / F51-
134750M/TOM

forming a first gate electrode on the semiconductor including the fourth impurity layer through the first gate oxide film.

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12. (Original) A semiconductor manufacturing method according to claim 11, wherein the second impurity layer is thinner than the first impurity layer.
